

CLAIMS

1. An antibody obtained by immunizing an animal with polypeptides which comprise an amino acid sequence represented by SEQ ID NO: 1, or an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 1 by deletion, substitution, or addition of 1 or several amino acids, and has fibroblast growth factor-23 activity, which has activity controlling phosphate metabolism or vitamin D metabolism, and is shown by the following (a), (b), or (c):

(a) an antibody which recognizes an amino acid sequence between the 180th and the 194th, or the 237th and the 251st amino acid residues represented by SEQ ID NO: 1;

(b) an antibody which is produced by a hybridoma whose accession number is FERM BP-7838, FERM BP-7839, FERM BP-7840, or FERM BP-8268; or

(c) an antibody which is competitive with the antibody produced by the hybridoma whose accession number is FERM BP-7838, FERM BP-7839, FERM BP-7840, or FERM BP-8268 upon binding with the polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 1.

2. The antibody of claim 1, which is a monoclonal antibody.

3. The antibody of claim 1 or 2, which is produced by a hybridoma whose accession number is FERM BP-7838, FERM BP-7839, FERM BP-7840, or FERM BP-8268.

4. A pharmaceutical composition, which comprises the antibody of any one of claims 1 to 3 as an active ingredient.

5. The pharmaceutical composition of claim 4, which is effective against at least one disease selected from tumor-induced osteomalacia, ADHR, XLH, renal osteodystrophia, dialysis osteopathy, osteoporosis, hypophosphatemia, rickets, osteomalacia, dysfunction of the renal tubule, osteopenia, hypocalcemia, disorder of bone extension, disorder of bone calcification, hyperparathyroidism, ectopic calcification, itching, osteosclerosis, Paget's disease, hypercalcemia, hypoparathyroidism, ostealgia, decreased muscle force, skeletal deformation,

failure to thrive, and hypovitaminosis D.

6. The pharmaceutical composition of claim 5, which is effective against at least one disease selected from tumor-induced osteomalacia, XLH, hypophosphatemia, osteoporosis, disorder of bone extension, disorder of bone calcification, and osteomalacia.

7. An agent for promoting osteogenesis, comprising the antibody of any one of claims 1 to 3 as an active ingredient.

8. The pharmaceutical composition of any one of claims 4 to 6, which comprises at least 2 types of the antibodies of claim 1 recognizing different sites.

9. The pharmaceutical composition of claim 4, wherein the antibody recognizes an amino acid sequence between the 180th and the 194th amino acid residues represented by SEQ ID NO: 1.

10. A method for detection of a fibroblast growth factor-23, which comprises causing an antibody that recognizes a part of an amino acid sequence between the 25th and the 179th amino acid residues represented by SEQ ID NO: 1 and an antibody that recognizes a part of an amino acid sequence between the 180th and the 251st amino acid residues represented by SEQ ID NO: 1 to react with a test sample.

11. The method for detection of claim 10, wherein the antibody that recognizes a part of an amino acid sequence between the 180th and the 251st amino acid residues represented by SEQ ID NO: 1 is an antibody that recognizes an amino acid sequence between the 180th and the 196th amino acid residues represented by SEQ ID NO: 1.

12. The method for detection of claim 10, which uses a thrombin inhibitor.

13. The method for detection of claim 10 or 11, wherein the antibody is produced by a hybridoma whose accession number is FERM BP-7838, FERM BP-7839, FERM BP-7840, or FERM BP-8268.

14. A kit for detecting a fibroblast growth factor-23, which contains an antibody that recognizes a part of the amino acid sequence between the 25th and the 179th

amino acid residues represented by SEQ ID NO: 1 and an antibody that recognizes a part of the amino acid sequence between the 180th and the 251st amino acid residues represented by SEQ ID NO: 1.

15. The kit of claim 14, wherein the antibody that recognizes a part of the amino acid sequence between the 180th and the 251st amino acid residues represented by SEQ ID NO: 1 is an antibody that recognizes the amino acid sequence between the 180th and the 196th amino acid residues represented by SEQ ID NO: 1.

16. The kit of claim 14 or 15, wherein the antibody is produced by a hybridoma whose accession number is FERM BP-7838, FERM BP-7839, FERM BP-7840, or FERM BP-8268.

17. An anti-fibroblast growth factor-23 antibody-binding material, to which at least one antibody selected from the antibodies of claims 1 to 3 is bound.

18. A medical appliance, which is provided with the binding material of claim 17.

19. The medical appliance of claim 18, which is used for removing the fibroblast growth factor-23 in blood.